



Evaluating Knowledge of Safe Injection Among Perioperative Nurses in Two Tertiary Hospitals in Lagos, Nigeria

Bilkis Bukola Adeleye, RN, RPN, BLS, HSE
Operating theatre, Alimosho General Hospital, LAGOS, Nigeria

Mariam Balogun, RN
Life Without Barrier, Tasmania, Australia

Ibrahim Olayinka Quadri, MBBS
Obstetrics and Gynaecology, Amosco Odofin Maternal and Child Centre, Lagos, Nigeria

Purpose:

The complex environment of the operating setting provides multiple exposures for health care workers to sustain sharp injuries.

These preventable injuries can expose health care workers to the risk of blood borne diseases (Dolan et al, 2010). Nurses are particularly at risk of sustaining these injuries as they provide frontline of care to the patients.

Consequently, numerous studies have been conducted on the knowledge of safe injection practices among nurses in Nigeria (Omorogbe et al, 2012 and Onyemochi et al, 2013). However, none of these studies have specifically examined knowledge and practice of safe injection among perioperative nurses.

Perioperative nurses are particularly at risk of sustaining sharp injuries as they work in one of the most challenging settings. The objective of this study was to evaluate the knowledge and practice of safe injection among perioperative nurses in two tertiary hospitals in Lagos, Nigeria.

Methods:

Descriptive cross-sectional study of 100 perioperative nurses (80% response rate). The nurses were required to complete a 21-item self-administered questionnaire.

Chi-square statistics was used to test the association between participants' qualification and years of experience and their knowledge of safe injection. Data were analyzed using Statistical Package for Social Sciences (SPSS).

Results:

91.3% of the participants were females and majority (33.8%) of them are in the 31 – 40 age group category. Knowledge of safe injection was low at 28.8% among the participants. Nurses with Bachelor degree in Nursing Science (BNSc) in addition to Registered Nursing (RN), Registered Midwifery (RM) and Registered Perioperative Nursing (RPN) qualifications have better knowledge of safe injection (100% vs. 3.4%, $P < 0.001$) and better knowledge of the characteristics of a safety box (100% vs. 40.7%, $P < 0.001$) than nurses with RN, RM and RPN only. Nurses with less than 20 years of professional working experience have better knowledge of the characteristics of a safety box than nurses with more than 20 years of working experience ($P = 0.023$). No statistically significant difference was observed between participants' years of professional working experience and knowledge of safe injection ($P = 0.262$).



Table 1: Characteristics of the participants

| | N | % |
|----------------------------|----|-------|
| Age | | |
| 20 – 30 years | 13 | 16.3 |
| 31 – 40 years | 27 | 33.8 |
| 41 – 50 years | 26 | 32.5 |
| 51 years and above | 14 | 17.5 |
| Sex | | |
| Male | 7 | 8.8 |
| Female | 73 | 91.3 |
| Qualifications | | |
| RN, RM and RPN only | 59 | 73.8 |
| RN, RM, RPN and BNSc | 21 | 26.3 |
| Years of experience | | |
| 1 – 10 years | 25 | 31.3 |
| 11 – 20 years | 38 | 47.5 |
| 21 – 30 years | 17 | 21.3 |
| Theatre | | |
| Hospital 1 | 61 | 76.25 |
| Hospital 11 | 19 | 23.75 |

RN: Registered Nurse
RM: Registered Midwifery
RPN: Registered Perioperative Nurse
BNSc: Bachelor of Nursing Science

Table 2: Association between perioperative nurses' socio-demographic data and knowledge of safe injection

| Variable | Knowledge of safe injection frequency (%) | | χ^2 (df) | P-value |
|--|---|----------|---------------|---------|
| | Yes | No | | |
| Age group in years | | | | |
| 20–30 | 2(15.4) | 1(7.7) | 3.44(3) | .329 |
| 31–40 | 11(40.7) | 16(59.3) | | |
| 41–50 | 7(26.9) | 19(73.1) | | |
| 51 and above | 3(21.4) | 11(78.6) | | |
| Qualification | | | | |
| RN, RM and RPN only | 23(4) | 57(96) | 70.57(1) | .000 |
| RN, RM, RPN and BNSc | 21(100) | 0(0) | | |
| Years of experience | | | | |
| 1–10 | 10(40.0) | 15(60.0) | 2.68(2) | .262 |
| 11–20 | 10(26.3) | 28(73.7) | | |
| 21–30 | 3(17.6) | 14(82.4) | | |
| RN and RPN only Registered nurse & registered preoperative nurse RN, RM, RPN and BNSc Registered nurse, midwifery & registered preoperative nurse RN, RM, RPN and BNSc Registered nurse, midwifery, registered preoperative nurse and bachelor of nursing science | | | | |

RN and RPN only: Registered nurse & registered perioperative nurse
RN, RM and RPN: Registered nurse, midwifery & registered perioperative nurse
RN, RM, RPN and BNSc: Registered nurse, midwifery, registered perioperative nurse and bachelor of nursing science

Table 3: Association between perioperative nurses' socio-demographic data and knowledge of standard precautions

| Variable | Knowledge of safe injection frequency (%) | | χ^2 (df) | P-value |
|---|---|----------|---------------|---------|
| | Yes | No | | |
| Age group in years | | | | |
| 20 – 30 | 5(38.5) | 8(61.5) | 3.43(1) | .331 |
| 31 – 40 | 16(59.3) | 11(40.7) | | |
| 41 – 50 | 13(50.0) | 13(50.0) | | |
| 51 and above | 3(21.4) | 11(78.6) | | |
| Qualification | | | | |
| RN, RM and RPN only | 23(28.0) | 60(72.0) | 23.29(1) | .000 |
| RN, RM, RPN and BNSc | 21(100.0) | 0(0.0) | | |
| Years of experience | | | | |
| 1 – 10 | 13(52.0) | 12(48.0) | 0.24(2) | .862 |
| 11 – 20 | 20(52.6) | 18(47.4) | | |
| 21 – 30 | 11(64.7) | 6(35.3) | | |
| RN and RPN only: Registered nurse & registered preoperative nurse RN, RM, BNSc and BNSc: Registered nurse, midwifery & registered preoperative nurse RN, RM, RPN and BNSc: Registered nurse, midwifery, registered preoperative nurse and bachelor of nursing science | | | | |

RN and RPN only: Registered nurse & registered perioperative nurse
RN, RM and RPN: Registered nurse, midwifery & registered perioperative nurse
RN, RM, RPN and BNSc: Registered nurse, midwifery, registered perioperative nurse and bachelor of nursing science

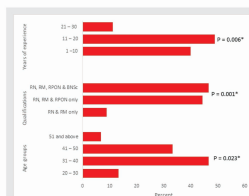


Figure 1: Association between perioperative nurses' socio-demographic data and knowledge on the characteristics of a safety box
*Significant at $P < 0.005$

Conclusion:

Findings from this study suggest that a bachelor degree qualification may provide nurses with additional knowledge and skills required for safe professional practice. Policy makers and practice leaders could encourage RN, RM and RPN qualified nurses to obtain a BNSc, as this may help improve safe clinical practice.

Keywords:

Knowledge, Perioperative Nurses and Safe Injection

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